to the more significant initial taps is processed with a more complex cancellation algorithm, such as a reduced state sequence estimation technique or an M-algorithm technique. A receiver is disclosed that includes a circuit for processing intersymbol interference due to the less significant tail taps using tentative decisions and an RSSE circuit for processing the intersymbol interference due to the more significant taps.

IN THE CLAIMS:

Please amend the claims as indicated below:

1. (Amended) A method for processing a signal received from a dispersive channel, said channel being modeled as a filter having $L+1$ taps, said method comprising the steps of:

processing intersymbol interference due to less significant taps with a lower complexity cancellation algorithm using tentative decisions; and

processing intersymbol interference due to more significant taps with a reduced state sequence estimation technique.

2. (Amended) The method according to claim 1, wherein said lower complexity cancellation algorithm is a decision-feedback equalizer technique.

3. (Amended) The method according to claim 1, wherein said lower complexity cancellation algorithm is a soft decision-feedback equalizer technique.

4. (Unamended) The method according to claim 1, wherein said lower complexity cancellation algorithm reduces the intersymbol interference associated with said less significant taps.

5. (Unamended) The method according to claim 1, wherein said more significant taps comprise taps below a tap number, U, where U is a prescribed number less than L.

6. (Unamended) The method according to claim 1, further comprising the step of sampling said signal.

7. (Unamended) The method according to claim 1, further comprising the step of digitizing said signal.

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~~8~~. (Amended) The method according to claim 1, wherein said reduced state sequence estimation technique is a decision-feedback sequence estimation technique.

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~~9~~. (Amended) The method according to claim 1, wherein said reduced state sequence estimation technique is a parallel decision-feedback equalization technique.

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~~10~~. (Amended) A receiver that receives a signal from a dispersive channel, said channel being modeled as a filter having $L+1$ taps, comprising:

a first circuit for processing intersymbol interference due to less significant taps with a lower complexity cancellation algorithm using tentative decisions; and

a reduced state sequence estimation circuit for processing intersymbol interference due to only the more significant taps.

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~~11~~. (Amended) The receiver according to claim 11, wherein said first circuit implements a decision-feedback equalizer technique to cancel said less significant taps using tentative decisions.

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~~12~~. (Amended) The receiver according to claim 11, wherein said lower complexity cancellation algorithm is a soft decision-feedback equalizer technique.



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13. (Unamended) The receiver according to claim 10, wherein said lower complexity cancellation algorithm reduces the intersymbol interference associated with said less significant taps.

14. (Unamended) The receiver according to claim 10, wherein said more significant taps comprise taps below a predefined tap number, U, where U is less than L.

15. (Amended) The receiver according to claim 10, wherein said reduced state sequence estimation circuit employs a decision-feedback sequence estimation technique.

16. (Amended) The receiver according to claim 10, wherein said reduced state sequence estimation circuit employs a parallel decision-feedback equalization technique.

17. (Amended) A method for processing a signal received from a dispersive channel, said channel being modeled as a filter having $L+1$ taps, said method comprising the steps of:

processing intersymbol interference due to less significant taps with a lower complexity cancellation algorithm using tentative decisions; and

processing intersymbol interference due to more significant taps with an M-algorithm technique.

18. (Amended) A receiver that receives a signal from a dispersive channel, said channel being modeled as a filter having $L+1$ taps, comprising:

a circuit for processing intersymbol interference due to less significant taps with a lower complexity cancellation algorithm using tentative decisions; and

a sequence estimation circuit that implements an M-algorithm for processing intersymbol interference due to only the more significant taps.

19. (Amended) A method for processing a signal received from a dispersive channel, said channel modeled as a filter having L taps, said method comprising the steps of:

processing intersymbol interference due to less significant taps with a first algorithm of first complexity; and

processing intersymbol interference due to more significant taps with a second algorithm of second complexity that is greater than said first complexity.

20. (Amended) A receiver that receives a signal from a dispersive channel, said channel modeled as a filter having L taps, comprising:

a processing circuit that processes intersymbol interference due to less significant taps with a first algorithm of first complexity; and

a processing circuit that processes intersymbol interference due to more significant taps with a second algorithm of second complexity that is greater than said first complexity.

21. (Amended) A receiver that receives a signal from a dispersive channel, said channel modeled as a filter having L taps, comprising:

means for processing intersymbol interference due to less significant taps with a first algorithm of first complexity; and

means for processing intersymbol interference due to more significant taps with a second algorithm of second complexity that is greater than said first complexity.

22. (Amended) A receiver that receives a signal from a dispersive channel, said channel modeled as a filter having L taps, comprising:

means for processing intersymbol interference due to less significant taps with a lower complexity cancellation algorithm using tentative decisions; and

means for processing intersymbol interference due to more significant taps with a reduced state sequence estimation technique.